New Aviation Fuel Bulk Storage Tank Construction

Client: Defence Infrastructure Organisation (DIO)
Asset: Ascension Island Petroleum Supply Depot (PSD)
Role: Design, Construction
Contractor: Mott MacDonald
Date: June 2009 – April 2012
Value: £6M

Background:
The site at Catherine Point in Ascension Island is a Petroleum Storage Depot (PSD) providing a refuelling point for the strategic air bridge between the UK and the Falkland Islands. Fuel is supplied from offshore tanker through a floating hose system. It provides both ground and aviation fuels to RAF and USAF airfield facilities.

The problem:
In 2009 BPA were commissioned to conduct a capacity study to review the PSD facilities at Catherine Point. A number of integrity issues and shortfalls were identified in the ageing infrastructure’s ability to meet the minimum strategic level of required fuel storage capacity.

The solution:
As a result of this review, BPA developed an outline design and a requirement specification to replace the three existing 1.5M litre ageing storage tanks with a new 8M litre capacity tank and associated pipework built to current industry standards. The design included all associated connections to the existing receipt and distribution systems together with bunding, lightning protection, corrosion protection and control and monitoring systems.

Mott MacDonald were selected for the Construction Project Management (CPM) with BPA retained as Owner’s Engineer to the Defence Infrastructure Organisation providing engineering guidance through procurement, design, construction and handover.

Fast facts:
One of the demolished tanks contained leaded fuel and required specialist disposal management.
Alterations of existing pipework were required in order to maintain fuel supply during the construction.
This was a challenging time critical project, effectively two years from start of design to the In Service Date.
Due to the local geological conditions, seismic loading formed part of the aspects of the design.